

# A photographic record of Silvery Pigeon *Columba argentina* from the Mentawai Islands, Indonesia, with notes on identification, distribution and conservation

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**SUMMARY.**—The Critically Endangered Silvery Pigeon *Columba argentina*, an insular pigeon of small islands off Sumatra and Borneo, has not been definitely recorded for over 70 years. We report here a photographic record of an individual observed near Masokut Island, off Siberut in the Mentawai archipelago, Sumatra, which documents the species' continued existence in the wild. We also present an overview of this pigeon's historical status in the region and a review of its key identification features. More research is needed to locate populations before any conservation measures can be designed.

Silvery Pigeon *Columba argentina* Bonaparte, 1855, is an enigmatic taxon of small islands and adjacent coastal forests in the Sunda Region with no recent confirmed records. It is one of the least-known birds in South-East Asia (Butchart *et al.* 2005, Yong 2009) with the only recent records being unconfirmed reports, on the Talang-Talang Islands and Banggi Island, two of Borneo's satellites (Rahman & Abdullah 2002, Wilson 2004), and from coastal and riverine forest on Sumatra (Nash & Nash 1985, van Marle & Voous 1988, Verheugt *et al.* 1993, Iqbal 2005). The last definite record involved a specimen taken in 1931 on Gurungan Besar Island, in the Karimata Islands, off south-west Borneo (Collar *et al.* 2001).

The specimen record suggests that Silvery Pigeon is (or was) a wide-ranging species, occurring on many small islands, with single mainland records on Sumatra and Kalimantan (Borneo). Its historical range included Simeulue Island, the Mentawai and Banyak islands off western Sumatra, the Riau-Lingga Islands off east Sumatra, the Natuna and Anambas islands, Burong Island off Sarawak and the Karimata Islands off south-west Kalimantan (Oberholser 1919, Chasen 1931, Robinson & Chasen 1936, Gibson-Hill 1952, van Marle & Voous 1988, Collar *et al.* 2001). Unconfirmed historical sightings are from Jarak Island in the Strait of Malacca (Robinson & Chasen 1936). A record from Sepilok (Sabah) on mainland Borneo is also considered unreliable (Sheldon *et al.* 2001). Since the last confirmed record in 1931, there have been reports at three reserves on the south-east coast of Sumatra (Padang Sugihan, Sembilang and Way Kambas), Banggi Island off northernmost Borneo and most recently, the Talang-Talang Islands off Sarawak (e.g. Nash & Nash 1985, Rahman & Abdullah 2002, Wilson 2004). None were confirmed due to potential confusion with the similar-looking Pied Imperial Pigeon *Ducula bicolor*, which is sympatric with Silvery Pigeon on small wooded islands, in coastal forests and mangroves (Collar *et al.* 2001).

Listed as Critically Endangered (BirdLife International 2004), Butchart *et al.* (2006) cited habitat loss and long absence of confirmed records as evidence for possible extinction. However a fairly recent, but undated photograph of two Silvery Pigeons of unknown origin held in a private collection, apparently in Hong Kong, provides evidence that the species is surely still extant. Here, we document a bird off Masokut Island, in the Mentawai Islands, which provides even more concrete evidence that the species survives in the wild.

## Field observations

On 13 October 2008, at 16.49 h, MTL was on a boat between Masokut Island and Simaimu Island (at c.01°50'55.11"S, 99°18'08.45"E), two small islets off the southern tip of Siberut, in the Mentawai Islands, Indonesia. Masokut (1,400 ha) and Simaimu (120 ha) are within 10 km of Siberut and are separated by a 2.2 km-wide channel (Fig. 1). Both islands have substantial forest cover with fruiting trees noted at the time of the visit. MTL photographed a pigeon flying from Masokut towards Simaimu, in the opposite direction to that of small groups of pigeons, subsequently identified from photographs as Green Imperial Pigeon *Ducula aenea* and Pied Imperial Pigeon.

The lone pigeon appeared superficially similar to Pied Imperial Pigeon, which is common at the locality, and was thus initially dismissed as the latter. Subsequently, however, we noticed several features that differed considerably from Pied Imperial Pigeon. YDL compared the photographs with eight specimens of Silvery Pigeon, all collected pre-1950, and 20 specimens of *D. b. bicolor* from diverse localities, held at the Raffles Museum of Biodiversity Research, National University of Singapore (Yong 2009). We also traced two undated photographs of a captive pair of Silvery Pigeons of unknown provenance on an avicultural website ([www.internationaldovesociety.com/SeedSpecies/SilveryWoodPigeon.htm](http://www.internationaldovesociety.com/SeedSpecies/SilveryWoodPigeon.htm)), purportedly held in a private collection in Hong Kong.

Based on our comparisons with specimens, the photographs of the captive birds and illustrations of *C. argentina* and Pied Imperial Pigeon in the literature (Smythies 1981, MacKinnon & Phillipps 1993, Baptista *et al.* 1997), it is clear that MTL's images are the first of Silvery Pigeon in the wild. Whilst there were no past records from Siberut and her satellites, it is unsurprising that Silvery Pigeon should occur there given that it is apparently a highly nomadic, dispersive species. Indeed, Ripley (1944) predicted that Silvery Pigeon could occur on any of the West Sumatran islands.

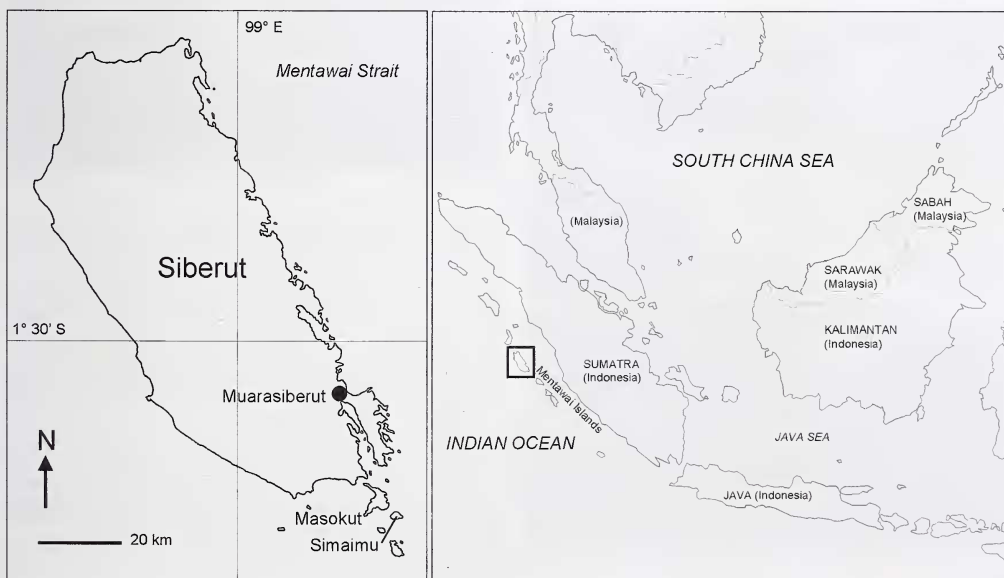


Figure 1. Location of Masokut and Simaimu in relation to Siberut (left), and the location of Siberut in the Mentawai Islands in relation to Sumatra (right)



Figures 2–3. Silvery Pigeon *Columba argentina* in flight showing upper- and underwing patterns, Masokut Island, Mentawai Islands, Indonesia, 13 October 2008 (Mark T. Lee)



Figure 4. Pied Imperial Pigeon *Ducula b. bicolor* in flight showing underwing pattern, Similan Islands, Thailand, 11 March 2007 (Carl-Johan Svensson)

Figure 5. Two specimens of Pied Imperial Pigeon *Ducula b. bicolor* (top) compared with a Silvery Pigeon *Columba argentina* (bottom) (Yong Ding Li)

Figure 6. Underwing pattern of Pied Imperial Pigeon *Ducula b. bicolor* (top) and Silvery Pigeon *Columba argentina* (Yong Ding Li)

Figure 7. Specimen of Silvery Pigeon *Columba argentina* showing close-up of facial features, including the two-toned hooked bill and reddish orbital skin around the eye (Yong Ding Li)



## Identification

Silvery Pigeon is easily confused with the very similar Pied Imperial Pigeon, with which it is sympatric (Gibbs *et al.* 2001, Butchart *et al.* 2005). Both are small-island specialists and historical observations from Burong Island, off Sarawak, and Bungaran Island in the Natuna Islands demonstrated that they nest and forage in close proximity (Robinson & Chasen 1936, Smythies 1981). However, based on the specimens mentioned above, we identified several consistent, diagnosable differences in plumage and bare-parts coloration. We concluded that despite the similarities highlighted in the literature, the two species are distinguishable using a few key features (Yong 2009).

**Bare parts.**—All specimens of Silvery Pigeon exhibited a distinct orbital skin that ranged from dark reddish to purplish brown, which is never shown by Pied Imperial Pigeon. Furthermore, this feature is consistent in the two captive birds. In flight at a distance, it is difficult to distinguish the eye within the darkish orbital skin, affording Silvery Pigeon the appearance of having an unusually 'large eye' (Fig. 2). In Silvery Pigeon the feathers of the forehead and lores extend over a large part of the maxilla, unlike Pied Imperial Pigeon. Silvery Pigeon has a two-toned maxilla with a deep purplish-red base (almost black in specimens) and an orange-yellow tip covering *c.*50% of the maxilla. The mandible is also two-toned and hooked, although the yellowish tip occupies <25% of its length; in contrast the bill of Pied Imperial Pigeon is uniformly blue-grey. These features, however, will be difficult to observe in the field, unless the bird is seen very close (*cf.* Gibbs *et al.* 2001).

**Plumage.**—Overall, Silvery Pigeon is pale silvery blue-grey compared to the creamy white to white of Pied Imperial Pigeon. Perched Pied Imperial Pigeons should show black on the wings extending to the 'shoulder'. Seen from above, the primaries, primary-coverts and outer secondaries are black, whilst Silvery Pigeon has all-black primaries and secondaries (Baptista *et al.* 1997), so that when perched, Silvery Pigeon should show more black on its wings because the folded secondaries are wholly black, whereas only the outer secondaries are black in *D. bicolor*. Furthermore, the tail of Silvery Pigeon has a broad black terminal half, clearly lacking the extensive white in the outer tail of Pied Imperial Pigeon, which shows as a wedge-shaped apical tail-band (Fig. 4) (Gibbs *et al.* 2001).

Seen in flight, Silvery Pigeon should show a considerably narrower band of 'black' covering less than half the wing area (Fig. 3) as compared to Pied Imperial Pigeon, which shows extensive black covering more than half the wing area. Seen at close range, the underwing pattern of Pied Imperial Pigeon differs significantly from Silvery Pigeon, in which only the outermost primaries are all black. The remaining primaries and secondaries are only partially black, with the black covering about one-third of the lower vane. The amount of black on the feather also decreases away from the outer primaries, unlike Pied Imperial Pigeon in which the primaries and secondaries are all black. This pattern explains the narrower band of black on Silvery Pigeon's underwing when seen in flight (Yong 2009). As shown in Figs. 4 and 6, Pied Imperial Pigeon has considerably more black on the underwing.

## Discussion

*Columba argentina* is probably the most enigmatic pigeon in the Sunda Region. Due to its superficial similarity to Pied Imperial Pigeon, confusion between them is highly possible and the species has quite probably been overlooked during biological surveys, given the lack of good illustrations in field guides, especially of birds in flight. The only such works to illustrate Silvery Pigeon are MacKinnon & Phillipps (1993) and Smythies (1981), neither of which depicts the species in flight. Other illustrations, mostly showing perched birds, are

in Gibbs *et al.* (2001), Wells (1999) and Baptista *et al.* (1997; also reproduced in Collar *et al.* 2001). The underwing pattern of Silvery Pigeon is frequently assumed to resemble that of Pied Imperial Pigeon (*cf.* Gibbs *et al.* 2001), although as demonstrated here this feature is actually one of the most useful to separate the two species.

Our images represent the first wild photographs of Silvery Pigeon, and provide confirmation that the species persists. The identification was based on four key features. (1) Whilst it might initially appear an artefact of blurring in the photograph (Fig. 2), the unusually 'large eye', in fact is due to the dark orbital skin, and as we have shown, occurs in both sexes. (2) The extent of black on the tail is well defined and occupies only the terminal half on the pigeon photographed, which is consistent with specimens and illustrations (e.g. Baptista *et al.* 1997, Wells 1999, Gibbs *et al.* 2001), whereas in flight *D. bicolor* exhibits more considerable white on the undertail. (3) The underwing pattern is perhaps the most conclusive feature in the identification. It has generally been assumed that Silvery Pigeon has an underwing pattern more or less similar to Pied Imperial Pigeon, and certainly the difference has never been highlighted in the literature (e.g. Smythies 1981, MacKinnon & Phillipps 1993, Baptista *et al.* 1997, Wells 1999, Gibbs *et al.* 2001). The Silvery Pigeon photographed had a narrow band of black on its secondaries and primaries, covering the entire feather only over the outermost 2–3 primaries. In specimens, we found that most of the inner primaries and secondaries are not completely black, unlike Pied Imperial Pigeon, with most of these feathers being black over only 30–50% of their length. (4) In our comparison of Silvery Pigeon and Pied Imperial Pigeon specimens, plumage colour differences should appear striking when birds are seen close, even in poor light. Silvery Pigeon has a largely blue-greyish appearance with a slight green iridescence on the nape (not visible at a distance) unlike the very pale cream-white plumage of Pied Imperial Pigeon (Fig. 5).

Our record of Silvery Pigeon is unsurprising given that the species has been recorded historically on other islands in the Mentawai group and is speculated to disperse widely in search of food (Collar *et al.* 2001).

Silvery Pigeon is considered Critically Endangered (BirdLife International 2004) and ecological data are limited, making field surveys an urgent priority as a prelude to conservation measures. Currently, priority should be afforded to follow-up surveys of Siberut and her satellites (especially Masokut) to locate remnant populations. This could be complemented by baseline surveys of fruiting tree phenology to better understand food availability and feeding ecology of pigeons on small islands. Such work is also especially needed in the Banyuasin Peninsula of south-east Sumatra, where there have been unconfirmed modern records of large numbers of this pigeon (Nash & Nash 1985). Furthermore, increased field work on small forested islands in the region, especially those where the species has not been previously recorded but that still possess suitable habitat (e.g. Nias, Singkep, Tioman) might detect new populations.

One major threat faced by Silvery Pigeon is habitat loss, with extensive clear-cutting for agriculture and logging occurring throughout the species' range. Batam Island, where Silvery Pigeon formerly occurred, is now largely deforested with very little remaining forest habitat (Sodhi *et al.* submitted). Neighbouring Bintan is comparatively less developed, but is now only 16% forested (Sodhi *et al.* submitted). Recent surveys have failed to detect the species on both islands (Rajathurai 1996). Likewise, Pagai Selatan, another island from which the species is known, is also now heavily deforested (Collar *et al.* 2001). Hunting probably also takes a toll, as with many pigeons in Asia, Australia and Oceania (Walker 2007). Whilst no direct evidence exists to indicate that Silvery Pigeon is hunted for food, large-bodied pigeons, especially many similar-sized *Ducula*, often provide subsistence meat (Sankaran 1998, Walker 2007). Further losses might occur through poaching to supply the

pet trade, as exemplified by the two captive birds in Hong Kong. However, the true impact of hunting on wild populations remains unknown.

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